

**SYSTEM FOR COMPUTATIONALLY EFFICIENT ADAPTATION OF
ACTIVE CONTROL OF SOUND OR VIBRATION**

ABSTRACT

In a method for reducing sensed physical variables generating a plurality of control commands are generated at a control rate as a function of the sensed physical variables. An estimate of a relationship between the sensed physical variables and the control commands is also is used in generating the plurality of control commands. The estimate of the relationship is updated based upon a response by the sensed physical variables to the control commands. The generation of the control commands involves a quadratic dependency on the estimate of the relationship and the quadratic dependency is updated based on the update to the estimate.